AM100
Centrifugal Auto-Mixer
User Manual

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1. User Notice

- Thank you for ordering the AM100 Centrifugal Auto-Mixer.
- Prior to using this product, please read this **User Manual** carefully for set-up, usage and maintenance instructions.
- Please keep this User Manual handy as a reference for your AM100 Centrifugal Auto-Mixer.
- Please use this machine according to the instructions described in this User Manual. Failure to do so may result in operator injury or machine malfunction.
- If the purchaser does not file a written complaint to Great Lakes Orthodontics within seven (7) days of receiving the product, we will assume the purchaser has completely understood the contents of this User Manual and accepted the product as shipped.
- Please contact Great Lakes Orthodontics if you have any problem with the machine.
- The manufacturer reserves the right to make changes and improvements to any of the products described in this manual without prior notice.

2. Warranty/Liability Information

- The AM100 Centrifugal Auto-Mixer is warranted for one (1) year from date of purchase.
- Great Lakes Orthodontics shall not assume any responsibility for any malfunction, damage, or accident of personal bodily injury due to the improper removal, modification, maintenance, or repair of the AM100 Auto-Mixer by parties other than us.
- Great Lakes Orthodontics shall not assume any responsibility for any malfunction, damage, or accident of personal bodily injury due to using a product not provided by us.
- Great Lakes Orthodontics shall not assume any responsibility for any malfunction, damage, or accident of personal bodily injury due to the improper removal, modification, maintenance, or repair of the AM100 Auto-Mixer that did not include parts provided by us.
- Great Lakes Orthodontics shall not assume any responsibility for any malfunction, damage, or accident of personal bodily injury due to the improper operation of the AM100 Auto-Mixer not in compliance with this User Manual.
- Great Lakes Orthodontics shall not assume any responsibility for any malfunction, damage, or accident of personal bodily injury caused due to the usage environment not being in compliance with the power, installation environment and conditions specified in this User Manual.

3. Indications for Use

- Use of this product is restricted to medical/dental professional use only.
- This product is suitable for mixing 25-100g of alginate powder in a short time period.
- This product should not be used to mix caustic material.

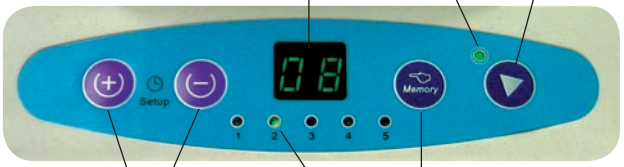
4. Product Introduction

4.1 Parts and Accessories

1. Machine body
2. Cover
3. Start/Stop button
4. Time memory selection button
5. Time adjustment buttons
6. Time display
7. Time memory number position indicator
8. Indicator light
9. Power cable receptacle
10. Main power switch
11. Power cable
12. Stir stick
13. Spatula
14. Water dosing bottle
15. Mixing cups (4 ea.)
16. Fixed bolts for transportation

4.2 Product Specification

Power Supply:	110v @ 60Hz
Power:	400W
Revolution:	3,600 rpm @ 60Hz
Timer:	4-16 sec. (adjustable by second)
Memory:	5 (initial settings - 6, 8, 10, 12, 15 sec.)
Net Weight:	19kgs. (41.9 lbs.)
External dimension:	215mm (w) x 310mm (h) x 275mm (d)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Setup
Memory
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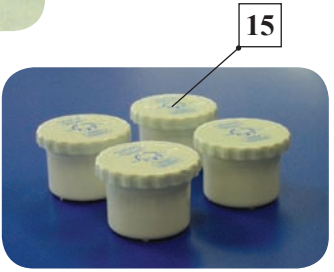
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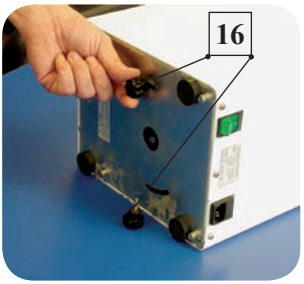
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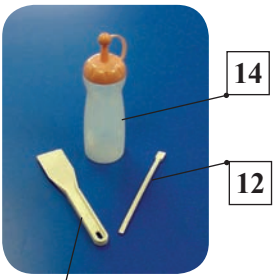
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5. Installation and Use

5.1 Conditions for Installation and Use

- For indoor use only.
- Please use at temperatures between 41˚-104˚F/5˚-40˚C.
- Please use at a relative humidity of ≤ 85%.
- Please use the power voltage of 110v @ 60Hz.
- Please use at an electric current of 10A.

5.2 Installation

Important: Please remove the two (2) fastening bolts fixed at the bottom of the machine (Fig. 1) before using this product, or the machine will be damaged.

- The machine should then be installed on a stable counter or table with a flat surface.
- Never install near flammable or explosive substances.
- Should the machine malfunction, do not attempt to use. Using the machine in this condition may result in additional damage to the mixer as well as voiding the warranty.

6. Transportation

Important: If the mixer is to be returned for repairs or brought to another location, please fasten the aforementioned fastening bolts to avoid malfunction or damage.

- Not securing the motor with the two fastening bolts when transporting/ shipping voids the product warranty. Please store the two fastening bolts for future use.

7. Power

- Connect the Power Cable to the Power Cable Receptacle on the rear of the machine (Fig. 2).
- Plug 3-prong, grounded end of Cable into the power source (wall receptacle).
- Turn mixer on at Main Power Switch located on the rear of the machine (Fig. 3). When the switch is turned on, the Memory Indicator Light and Time Display on the Operation Panel should be lit.

Fig. 1

Fig. 3

Fig. 2

8. Mixing of Alginate Powder

- Prepare the alginate powder and cool water (50˚-68˚F/10˚-20˚C) in the Mixing Cup as described in the next step.

  Important Information:
  The hardening times of the alginate can be controlled by water temperature. If cool water is not used, the hardening time will be shortened.

- Measurement of the alginate powder should be done according to the alginate manufacturer's instructions. Add the corresponding amount of water to the alginate powder already in the Mixing Cup.

- The dosage to be mixed should be between 25-100g. In order to prevent malfunction of the machine, do not exceed 100g.

- Cap the Mixing Cup by covering the cup, then pressing down on it while turning it to lock it in place.

  Important Information:
  The Mixing Cup must be completely tightened or the alginate powder will splash during mixing and cause the machine to malfunction. The Mixing Cup and Mixing Cup Cap are considered accessory products and not included in the machine warranty. If the cap cannot be secured tightly, please use a new mixing cup and cap.

- Place the Mixing Cup inside the mixing well (Fig. 4).

Fig. 4

- Close the Mixer Cover.
  - The Mixer will not start if the cover is not secured properly.
  - Do not Start/Run the machine when the Mixing Cup is empty.

- Based upon the amount of alginate powder added to the mixing bowl, set the timer. Please refer to **Setting the Mixer Timer** (section 9).

- Once the timer is set, press the **Start Button**. The digital display will count second-by-second, and will display the time of completion. Do not force open the cover while the machine is running as this may cause injury to the operator or damage the machine.

  Important Information:
  Should you need to stop the Mixer during mixing, press the **Stop Button** and the Mixer will immediately stop. During mixing, should the Mixer detect any abnormal condition, it will stop automatically.

- The Mixer will beep to indicate that it has completed the mixing cycle.
- After making sure that the Mixer has stopped, open the cover and remove the Mixing Cup. Use the Spatula to remove the alginate material.
- Alginate material will set Bubble Free.

9. Setting the Mixer Timer

- The Timer has 5 pre-programmed settings:

Memory	Mixing Time (seconds)
1	6
2	8
3	10
4	12
5	15

- Press the **Memory Selection** button to select one of the pre-programmed time settings required for mixing. The corresponding indicator light will be lit.
- Press the (+) and (-) **Time Adjustment Buttons** to increase and decrease the time mixing setting. The setting range is 4-16 seconds.
- To permanently change the Timer pre-sets:
  - Choose the pre-set position (1, 2, 3, 4, 5) that you wish to change. The corresponding indicator light will turn on.
  - Press the **Memory Selection Button** for 5 seconds, it will beep once.
  - Once it beeps, release the **Memory Selection Button**.
  - Press the (+) and (-) **Time Adjustment Keys** to increase and decrease the time setting for that pre-set position.
  - Press the **Memory Selection Button** to lock in this new setting.
- A grid of alginate mix, mixing time settings, and impressions made, is listed below:

Alginate Scoops	Mixing Time (seconds)	Impressions Made
1	8	Small Full Arch
2	10	Medium Full Arch
3	12	Large Full Arch

(Water temperature between 50˚-68˚F/10˚-20˚C)

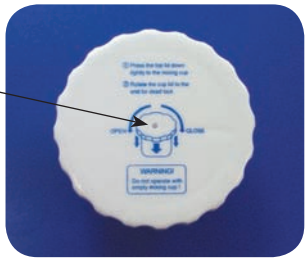
10. Maintenance

10.1 Mixing Cup

- After setting, the remaining alginate material inside the mixing cup can easily be removed. Once removed, use a clean soft cloth to wipe it down.
- The small hole at the center of the cap (Fig. 5) should be cleaned to ensure that it is not clogged or blocked in any way.

Important Information:
The small hole at the center of the cap must remain clear. If it becomes clogged or blocked, then the mixing cup cap will be difficult to open or close. Any water remaining after cleaning must be removed completely, otherwise it will cause a mixing error.

Fig. 5



- The Mixing Cup is a consumable component. Once it becomes distorted or cannot be sealed tightly, please replace with a new one.

10.2 Cleaning the Mixer

- Use a cloth to clean any dirt on the outside of the Mixer. Use a neutral cleaning agent to remove large amounts of debris.

NOTE: DO NOT CLEAN THE INSIDE OF THE MIXER OR THE MIXER WELL WITH WATER.

Important Information:
Never use solvent or volatile chemicals for cleaning. This may damage the machine components and will cause the machine surface to fade.

11. Troubleshooting

- If you experience a malfunction, please try to resolve the problem by using the **Troubleshooting Chart** (page 9). If the machine is still malfunctioning, please contact Great Lakes Orthodontics for further instruction and assistance.

Troubleshooting Chart

Problem	Cause	Method
Mixer does not power on/turn on when you press the power button	Bad power cord connection	Inspect power cord connection
	Main power switch is in OFF position (rear of Mixer)	Turn main power switch on
	Burned out fuse	Inspect fuse and change if needed. If the fuse is burned out, contact Great Lakes Orthodontics for repair instructions
The digital display does not come on	Defect in PC board	Contact Great Lakes Orthodontics for repair instructions
	Indicator light is bad	Replace the indicator light
The initial running is slow	Defect in driving motor or belt	Contact Great Lakes Orthodontics for repair instructions
	Defect in the starting condenser	Contact Great Lakes Orthodontics for repair instructions
Abnormal noise or vibration while running	Too much alginate in mixing cup	Try smaller amount of alginate
	Mixer started, but there is nothing inside the mixing cup	Place properly filled mixing cup in the unit and retry
	Damaged belt	Contact Great Lakes Orthodontics for repair instructions
	Alginate powder splashes, caused by loosening of mixing cup cap	Check to see if the mixing cup on the cap is tightly closed
Motor does not start or alginate mixing is uneven	Incorrect amounts of alginate and water	Refer to alginate suppliers mixing ratios
	Driving motor/triangular belt or round belt is damaged	Contact Great Lakes Orthodontics for repair instructions
	The sensor lock in the machine cover is malfunctioning	Check to see if the machine cover is closed tightly
E1 appears on the mixing time indicator	The top cover is not in the closed position	Close the machine cover again

12. Product and Accessories

Part Number	Description	Quantity
100-060	Full Machine	1
100-061	Power Cable	1
100-062	Mixing Cup	1
100-063	Water Dosing Bottle	1
100-064	Spatula	1
100-065	Stir Stick	1

Great Lakes Orthodontics Contact Information:

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